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## **Airborne (1-->3)-beta-D-glucan and airway disease in a day-care center before and after renovation**

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### **Abstract**

Changes in symptoms and airway responsiveness among persons who worked in a day-care center that had microbial growth problems were assessed before and after renovation. Before and after the building renovation, the investigators used the Limulus assay with (1-->3)-beta-D-glucan-specific lysate to measure airborne levels of (1-->3)-beta-D-glucan, a cell-wall component of molds. Airway responsiveness and subjective symptoms were measured among 14 female employees with a methacholine test and a standardized questionnaire. After the renovation, (1-->3)-beta-D-glucan-glucan levels decreased from 11.4 to 1.4 ng/m<sup>3</sup>. The number of persons who had increased airway responsiveness decreased after the renovation. Two employees developed a classical allergy to cat and pollen during the observation period. Although the study included only a few subjects and was based on only one day-care center, the data suggest that (1-->3)-beta-D-glucan may be related to airways inflammation caused by indoor air pollution.

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